PHONE (714) 793-2573

SHALE DEVELOPMENT CORPORATION

HYDROCARBON PROCESSES
OIL PRODUCTION

313 HIGH STREET • P. O. BOX 44
REDLANDS, CALIFORNIA 92373

SAND WASH PROJECT

UINTAH COUNTY, UTAH

SPENT SHALE COMPACTABILITY, FERTILITY & SALINITY

PROCESS CONDITIONS

The spent shale leaving the ENDECO I and ENDECO VIII processor is in the form of a tan ash-like material in the same approximate size and shape as the ore feed stock supplied to the retort.

Due to the fact that the carbon residue, which remains after retorting, is used as the fuel source for the process, little or no carbon remains in the spent shale.

COMPACTION

In areas where planting is to occur, mechanical compaction probably should not exceed 75% due to the expected hydration of the sodium ion created by the addition of water. This hydration would create an impermeable surface which would inhibit plant growth if excessive mechanical compaction were used.

In areas such as roads where planting will not occur, mechanical compaction of 85% in conjunction with the natural compaction due to hydration, should create a solid impermeable surface providing an excellent road bed.

SALINITY

Calcium Carbonate = 29.7%

pH = 8.1

Conductivity = 9.0 mmhos/cm @ 25^{o}C

NUTRIENTS

Potassium = 360 ppm

Phosphorus = 5.6 ppm

Zinc = 4.7 ppm

Iron = 40 ppm

LABORATORY REPORT

ABBOT A. HANKS, INC.

ENGINEERS ASSAYERS. CHEMISTS. METALLURGISTS
CONSULTING - TESTING - INSPECTING
ESTABLISHED 1866
624 SACRAMENTO STREET
SAN FRANCISCO 11. CALIFORNIA
TELEPHONE GARFIELD 1-1697

Lab. No. 13896 *Date* May 14, 1957

Submitted by Sand Wash Mining Company
Myton,
Utah *Sample Mark* #17

QUALITATIVE SPECTROGRAPHIC ANALYSIS
Metals Found and Estimated Percentage Range

Less than .03%	*.03% to .30%*	*.30% to 3%*	*3% to 30%*	*30% to 100%*
Strontium Vanadium Chromium Nickel Cobalt Copper Lead Boron Silver	Titanium Manganese	Iron Magnesium Sodium Potassium	Aluminum Calcium	Silicon

Remarks

bob

RESPECTFULLY SUBMITTED.
ABBOT A. HANKS, INC.

By _____
Spectro Chemist

FORM A-8